

Walter Kaudern's geographical distribution of Babirusa, 1920

Alastair A Macdonald¹ and Friederike Johansson²

¹Royal (Dick) School of Veterinary Studies, The University of Edinburgh, Easter Bush Campus, EH25 9RG, Scotland.

²Göteborgs Naturhistoriska Museum, Museivägen 10, 413 11 Göteborg, Sweden.

Introduction

This extract (pp. 53-61) of a typed manuscript held at Göteborgs Naturhistoriska Museum (GNM Arkiv-nr 608) has been translated from German into English; editorial insertions to the text have been indicated by square brackets e.g. [Fig. 1]. The modernisation of village, island or species spelling occurs after the first correction, and these are also within square brackets. Where Kaudern had left gaps in the text, e.g. with respect to reference details, these have been retained as found. Where possible reference materials have been traced and these have been indicated by superscript numbers, and are listed sequentially at the end.

Walter Kaudern was born near Stockholm on March 24, 1881, and obtained his PhD at Stockholm University in 1910 (Wassén 1942; Lindberg 2006). In December 1916, together with his wife, Teres, and their two young boys, Sven and Walter, he set off for North Sulawesi, Indonesia. Part of their aim was to carry out a zoo-geographical study of the island, but increasingly he came to focus on anthropology. In March 1917 they established their first home base at Gurupahi in North Sulawesi. Their second home base was in Kulawi one year later. In January 1920 they sailed to the Banggai islands and then made their way by sea to Buton island. The family left Sulawesi in July 1920.

Kaudern's studies enabled him to make contact with many hunters in villages on Sulawesi. Having his wife and young children with him perhaps enabled the family group to make very close contact with the people and the way that they lived on the islands. He travelled extensively, and published the results of his various studies (Kaudern 1921a; Kaudern 1921b; Kaudern 1925a; Kaudern 1925b; Kaudern 1927; Kaudern 1929; Kaudern 1938; Kaudern 1944).

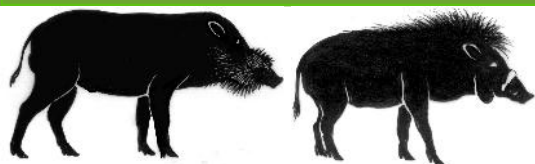
The translated text of his German language manuscript

Although the Babirusa of both Celebes [Sulawesi] and Buru are well enough known, their geographical spread is not known exactly. On my map I have indicated its entire distribution, in as much as I have found it in the literature and from own observations [Fig. 1]. I also have indicated the places where the different races may be found.

The Babirusa is a genuine jungle animal, and consequently it has disappeared from those large areas where the local people have cleared the land to build, and the jungle has thereby been ruined.

In order to make a reliable map of the distribution of the Babirusa, a detailed knowledge of the jungle and open country is necessary. Therefore I have only made the map detailed where my personal knowledge of the countryside allowed it.





Ecology and Conservation

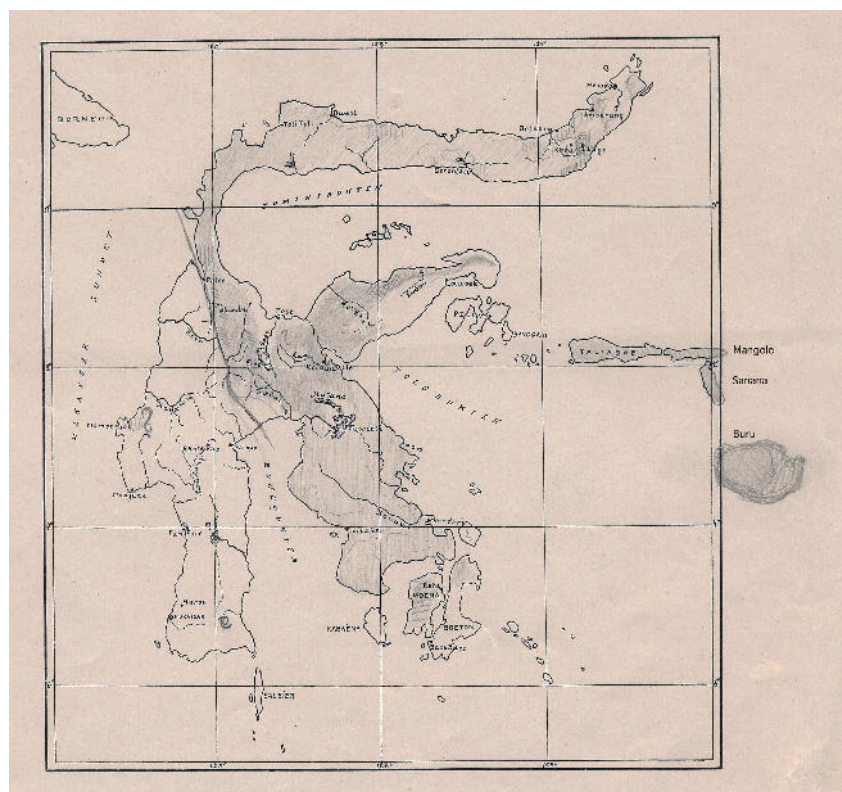


Fig. 1. Map of Sulawesi and neighbouring islands. The shaded areas denote where there is evidence that the Babirusa live; the question mark suggests an area of some doubt. The diagonal line indicates the likely boundary of Babirusa-inhabited territory. Artist credit: W. Kaudern.

Miu, and the river Koro between Gimpu and Belanta and its tributary the Mewe towards the north and Rampi towards the south [Fig. 1]. How far the animal goes south is not known to me. Perhaps the likely border is formed by the large riverine area of Rampi and Leboni towards the southeast where they flow towards the Bone bay.

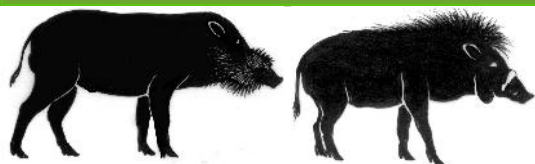
There are no trustworthy reports that the Babirusa are still to be found in the areas which lie to the west of this line, indeed anywhere in the whole of the Makassar peninsula. Nevertheless, a sergeant who had been stationed for some time in Mamudju [Mamuju] told me that a Babirusa had once been killed there. However, this statement did not seem to be completely trustworthy, since the local people said that it did not live there. A mistake of identity with the other wild pig [*Sus celebensis*] is not impossible; indeed in areas where the Babirusa occurs rarely or not at all, it can happen that even the local people will confuse wild [*Sus*] pigs, which have very large canines, for Babirusa.

Even if the Babirusa no longer occurs in the western and southwestern parts of Sulawesi, this has not always been the case. The researchers P. and F. Sarasin, who carried out studies in the Tjakondu cave in south Sulawesi, found a number of Babirusa remains in the Paleolithic deposits there, which indicated that the Babirusa once lived in these areas (Sarasin and Sarasin 1905). These gentlemen wrote more about this in their work *Reisen in Celebes* [Journeys in Sulawesi], volume X, page Y " -- nevertheless two things are remarkable; first of all the occurrence of the

The Babirusa needs more than just jungle in order to live. The terrain must not be too steep or stony. The Babirusa prefers to live where the terrain is largely flat and attractive, where it can be comfortable. In particular, swampy areas seem to be less often frequented than less swampy areas. However, in addition, in particular areas of the island, where all the appropriate conditions seem to be present, nevertheless the Babirusa is absent. For example, this seems to be the case in the southern part of the island, where large areas appear to be suitable for this animal.

According to the statements of the local people, the Babirusa is not to be seen west of a line, drawn from the river Palu with the nearby river





Ecology and Conservation



Babirusa, which in as much as anyone today knows is absent from south Sulawesi and you start finding it in Central Sulawesi."

Therefore, the Babirusa on Sulawesi now seems to be present only in the eastern part of Central Sulawesi, and in the north, northeast and southeast peninsulas. In north Sulawesi it occurs overall, wherever the natural surroundings permit it. Of course the Babirusa have disappeared from the larger built-up areas of Minahassa, as well as from the large plateau in the interior of Bolaang-Mongondou around the city of Kota Mobagu, the open low country near Gorontalo and from the large areas of coastal land which have been planted with coco palms. "Above about 1500M the vegetation has increasingly the character of Panda forest ---, at this height the Babirusa is said to be missing ", write the Sarasins. (*Reisen in Celebes*, volume X, page, Y) (Sarasin and Sarasin 1905).

In the mountains around lake Danau the inhabitants had caught a male Babirusa in a snare trap at a height of approximately 1300 M [Fig. 2]. In Minahassa it seems that the Babirusa can currently be found in the most easterly corner of the Sudara volcano and in the western part of the province. The middle parts of Minahassa are built-up too much to offer the Babirusa a suitable place to stay. It is also missing from the most northerly corner, according to the statements of the inhabitants.



Fig. 2. Photograph of an adult male Babirusa from near lake Danau, North Sulawesi (Kaudern 1921a). Photo credit: W. Kaudern, GNM 185-3.

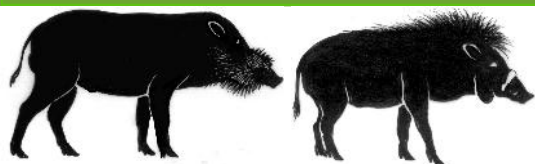
Whether it occurs on other islands close to the Minahassa coast is unknown to me. It seems not to live on Menadu Tuwa [Menado Tua island] and the small ring of islands around it.

We find some small islands along the coast of the north peninsula, for example in the Kwandang and Dondo bays. Whether the Babirusa live here or not, I do not know. Outside Sumalata lies the small island of Motu, and during a visit there the inhabitants maintained that the Babirusa were present, and at home there. However this could not be confirmed by me, and on various grounds it did not seem likely.

If it is difficult to obtain a completely trustworthy idea of the distribution of Babirusa in north Sulawesi, this applies even more so in central, northeast - and Southeast Sulawesi. The Sarasins maintained that the Babirusa live in Central Sulawesi without giving any details other than a single mention, and that is to Lindu (Kaudern 1938).

With reference to the eastern parts of Central Sulawesi the opinions are divided. Ten Kate (1910) writes in his "De weg van Bada naar Napu" , page 292 (Ten Kate 1910): "The Babirusa are not found in the inland forests." Kruyt (1912) on the other hand, in his large work " De Bare'esprekende Toradjas" says the following "The large hunt takes wild pigs, and under this heading,





Ecology and Conservation



Babirusa (mol. Mal. babi roesa; Bare'e ` e: rari, marari or tamrari, Par. - Kaili'sch: dolodo. or dolodoki; in the hunter's language: marakoro, ' meaning its body can be seen (hairless), or boeja koro, 'white body'. ... The Babirusa can be found throughout the whole area where the Bare'e-sprekende Toradjas live and also beyond there."

Thus it is indicated that the Babirusa really does occur in different places of East Central Sulawesi. However, in my experience, not very frequently restricted to particular areas only, for example the forest areas west of lake Posso [Poso] and in its extensions to the south, which means the forest areas on the ridge of hills which bends towards the southeast in the direction of southeast Sulawesi.

Also in the forested areas in the Mori landscape, on both sides of the Kolonodale bay, the Babirusa is said to occur rather abundantly, according to the reports of the inhabitants. Moreover they are present around south Bungku and towards to the north-east in north Bungku and Todjo.

During my journey from Poso through Lage, Ondae and Pada up to Mori, I heard that in these three provinces, the Babirusa should not occur there any longer. Overall it was said to me by the local people that they should be present in Takalekadjoin in the forests to the west of lake Poso and in Mori. In Ondae I received however a decoration, in the form of a necklace or collar, that a leader of headhunters once owned, in which, among other things was fastened the strong lower canine of a Babirusa. This could be interpreted that the Babirusa occurred in this province. However, the owner of the chain volunteered the information that the tooth came from the south. Generally speaking, the people certainly knew of the Babirusa, which indicated that not so long ago it had indeed lived in these parts of central Sulawesi.

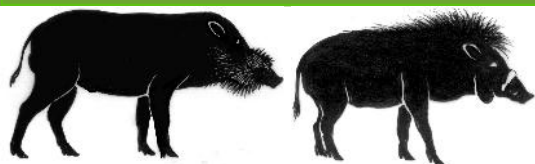
Whether the Babirusa are to be found in the areas between Lage and Pada in the south and in the north-east peninsula in the east is not known to me. I would say 'perhaps, if the necessary jungle is available'.

With regard to northeast Sulawesi there are very few reports of whether the Babirusa occurs or not. Weiner (untraced) who travelled across the peninsula near Lojngang, said that in the central mountains, the uppermost parts of which form an approximately 1150 M high and approximately 1 km wide densely forested plateau, both Anoa and Babirusa are to be found in abundance.

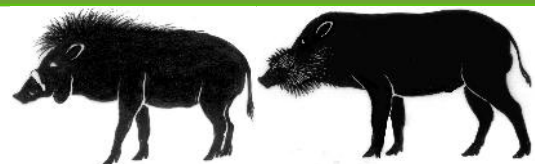
This latter statement did not seem to me to be completely reliable, even if the description of the terrain appeared to be suitable for the Babirusa. During my stay in Lojngang [Loinang] in December 1919, I received completely different set of information with respect to the Babirusa. The local people, not only from Pinapuan and Lingketting but also from Tambunan, said that the Babirusa were only to be found in the coastal forests along the northern edge of the peninsula, particularly in the area of Bunta. According to the local people, they are completely absent from the mountains not only from the steep slopes, but also above, on the central plateau in the middle of the peninsula.

The information from the local people appeared to be completely trustworthy. They collected resin from forests mentioned and hunted Anoa there also which they said were plentiful in the





Ecology and Conservation



mountains. The Babirusa was a well known animal to them and was particularly highly valued and very much desired, because the canine teeth of the Babirusa male were used by head hunters as decoration of the headdress of the leader. Such teeth could not be obtained in the mountains, but had to be bought on the coast.

How is it possible that the Babirusa does not live in the jungle of the central mountains? The question is not easy to answer with certainty. The slopes of these mountains are so steep and stony that it is not possible for the animal to have penetrated the interior from the coast up through the forest. The only one possibility seems to be that it penetrated from the interior of the southwest. But the further one travels into the southwest, the higher the mountains, and if it is the case that the Sarasins are correct in their statement that the Babirusa do not occur higher than 1500 M, it is possible that the mountains have prevented the spread towards the east as far as the central plateau.

It is not known to me how far along the coast to the east of Bunta the Babirusa are present. They are said to be present in the northern section of the eastern part the peninsula south of Bualemo. Whether the forest here is directly connected to the forest of Bunta; seems uncertain to me. If this is not the case, then this is, so to say, an island. However, one could also think that this forest is linked with the forest in the west via the forest filling the central part of the peninsula, where it is narrowest between Biak and Poh.

If one continues from there along the central mountains in a westerly direction, the forest soon disappears from the low altitudes in the south, where at about 300 to 400 M above sea level we found a broad strip of flat land. Since one does not find the Babirusa here, the Balantak Babirusa must be thought of either as a remnant of a earlier wider distribution, or it is to be found along the whole of the north coast of the north-eastern peninsula.

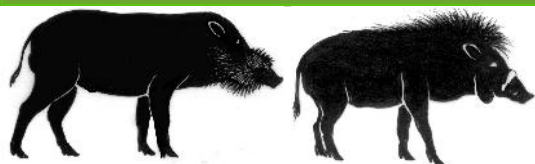
The Babirusa has been exterminated [by hunting] from the landscape of Lamala south of Balantak some generations ago, according to the statements of the local people.

No Babirusa were seen along the south side of the northeast peninsula from Lamala in the east past Luwuk, Kintom, Batui and up to Ondolean in the west. This was decidedly so at least with respect to Luwuk, Kintom and Batui.

The Babirusa do not seem to occur on the Togian islands which lay in the Tomini bay.

According to various criteria one might expect to find the Babirusa on the larger islands in the Banggai [Banggai] archipelago southeast of Luwuk. During my visit there in the February 1920, however, I found out that they were unknown on these islands. The terrain is unsuitable for it. Truly continuous forest is nearly completely absent, and in addition the soil is very stony. If it ever lived here, it must not have been difficult for the inhabitants to exterminate it. The possible disappearance [of the Babirusa], for example from Peling [Peleng] island must have happened a long time ago, as evidenced by the local people not having any word for this animal. I searched in vain for any remains of the Babirusa remains on the islands. Only in one village on west Peleng did I find a pair Babirusa of teeth as jewelry in the headdress of a headman. This jewelry





Ecology and Conservation



consisted of a lower and an upper canine, both of which were split and polished thin. They had been placed on the top of the headdress [Fig. 3]. This artifact had been passed from father to son for several generations, such that no-one knew any longer, out of what material they had been made. It cannot be excluded that these fragments stem from a time, when the Babirusa really did live at least on the island Peleng.

An investigation of the many caves, that can be found on Peleng, might perhaps answer question about whether the Babirusa had lived here or not.

With reference to the presence of the Babirusa on the southeast peninsula I have only very few reports resulting from a journey along the east coast. Consequently I cannot be certain where it occurs or is missing on this peninsula, however, it is clear that it can be found in various places.

Strangely, Elbert (1912) does not mention the Babirusa in his descriptions of his journeys in the southern most part of the peninsula. In contrast he states that the Anoa does occur there. The Sarasins also say nothing about the presence of the Babirusa in this part of Sulawesi.

As a result I have shaded in the whole of the southeast peninsula on my map [Fig. 1], except those places where there are maps that indicated open terrain. In this way I just want to indicate that the Babirusa also occurs on this peninsula.

The extension of this peninsula is represented by the islands of Muna, Buton, Kabaena, Wowoni and Tukangbesi [Tukang Besi]. It is not clear from the literature whether the Babirusa are also present on these islands. For example, Elbert (1912) says nothing about this. I have not excluded the possibility that [the Babirusa] may be found on the forest-covered Wowoni island, but have no proof of this, however. Nevertheless, they do occur on Muna and Buton, although restricted to small, somewhat restricted districts. This applies particularly to the island of Buton, where they are only to be found in the northern most part.

With regard to the island of Muna, someone in Raha said that the Babirusa can be found in the central and northerly parts of the island where large areas of forest are present. In the southern most part, just as in various other places, the forest has been cut down, and for this reason, naturally, the Babirusa have disappeared.

On the same submarine shelf on which the Banggai archipelago are situated, but lying somewhat further to the east, lie the Sula islands which have been little studied zoologically. Whether the Babirusa occur on these islands is not known. Koningsberger Koningsberger & In Van Hustijn (1918) writes about this in Van Hustijn's work 'Memorie over de Soela-eilanden [Recollections of

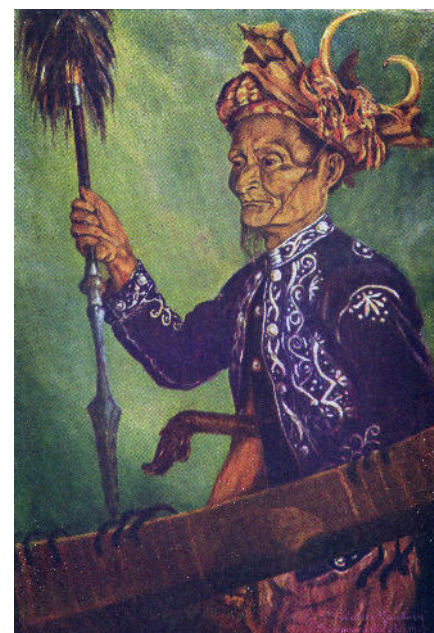
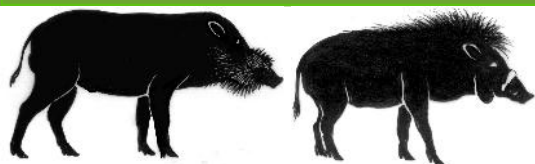


Fig. 3. Painting of Tomai Lagongga from Pinapuan, Peleng, North-east Sulawesi; note the Babirusa canine teeth decoration in the headdress (Kaudern 1921b). Artist credit: W. Kaudern. Göteborgs Museum of World Culture, Kaudern No. 3.





Ecology and Conservation



the Sula islands]'. The mammal fauna of the Sula islands is not much richer than that of most other islands from that part of our archipelago. Therefore it is possible, although not always with certainty to say that some types of animals are not by nature but by human intervention brought there. Among these, according to the collector Tarip (untraced), human introductions include, among others ... the Babirusa (*Babirusa babirusa*) [*Babyrousa babyrussa*] and the moluccan deer (*Rusa moluccensis*) [*Rusa timorensis*] as possibilities, although both by earlier opportunities still remain to be found here."

From the above-mentioned it does not follow that the Babirusa are to be found on all three Sula islands, and so it cannot be excluded that it lives or has lived on all three islands. The information from van Hulstijn's map (van Hulstijn 1918) and description over the nature of these islands, it must be entirely possible for them to live there.

In museums I found only Sanana noted as a place of collection. This does not mean that the specimens in question really originate from the Sula island of Sanana, but that it is possible that they were bought in the harbour of Sanana. Whether they came from the island with the same name, or from the other Sula islands, of Mangoli [Mangole] or Taliabu, naturally nobody knows.

I have not found any evidence to support the acceptance of the idea that the Babirusa were brought here by humans, and just as little concerning the islands Muna and Buton, that they probably originated from the time period when these islands were connected to the island of Sulawesi.

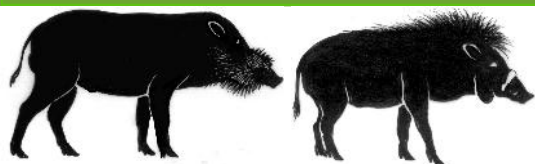
To the southeast of the Sula island Sanana lies the island of Buru where the Babirusa still lives, as has been well known for a long time. It has not been possible for me to obtain more accurate descriptions of the origins [of Babirusa] on this island.

Post scriptum

It is clear from the above account that lots of pieces of local information were added to Kaudern's personal experience of the distribution of Babirusa on Sulawesi and its neighbouring islands. Valentyn (1726) had reported the presence of Babirusa on Banggai island, part of the Peleng group of islands, and here Kaudern is suggesting, by the evidence of the headdress (Fig. 3) that Babirusa may have survived somewhere in that small archipelago until the 1800s. His report that they were still present on Muna and Buton a century ago is borne out by folk memory of them in recent years (Day & Macdonald 2016). The name for babirusa in north Buton, reported by a 94 year old gentleman, was Wewi Kanseulu Ogeno. He remembered seeing them a long time ago, and recounted that he recalled seeing two walking together; they did not walk as a group. He said that the Babirusa on Buton just ate some fruit in the forest; they never came into the farmland area (Day & Macdonald 2016).

Fragments of important historical accounts, such as these ones, may to be expected to lie almost forgotten in the memories of elderly hunters and in the archives and basements of the libraries and museums of the world. Sometimes there is a clue indicating their quiet repose; the recognition of something in a photo; a footnote in an old published paper; a comment that missionaries visited here or worked there; a set of old photographs with somebody's name attached. Treasures such as these await discovery (Macdonald & Johansson 2013).





Ecology and Conservation



Acknowledgements

We gratefully acknowledge the financial support of the University of Edinburgh and the Balloch Trust.

References

- Day, H. and Macdonald, A.A. 2016. unpublished
- Elbert, J. 1912. Die Sunda-Expedition des Vereins für Geographie und Statistik zu Frankfurt am Main, 1. Minjon: Frankfurt.
- van Hulstijn, P. In Van Hustijn, P. 1918. Memorie over de Soela-eilanden, etc. With plates and maps. Mededeelingen van het Bureau voor de Bestuurszaken der Buitenbezittingen bewerkt door het Encyclopædisch Bureau. 15. Batavia.
- Kaudern, W. 1921a. I Celebes obygder, I. Stockholm: Albert Bonniers.
- Kaudern, W. 1921b. I Celebes obygder, II. Stockholm: Albert Bonniers
- Kaudern, W. 1925a. Ethnographical studies in Celebes: Results of the author's expedition to Celebes 1917–1920. I. Structures and Settlements in Central Celebes. Göteborg
- Kaudern, W. 1925b. Ethnographical studies in Celebes: Results of the author's expedition to Celebes 1917–1920. II. Migrations of the Toradja in Central Celebes
- Kaudern, W. 1927. Ethnographical studies in Celebes. Results of the author's expedition to Celebes 1917–1920. III. Musical instruments. Göteborg.
- Kaudern, W. 1929. Ethnographical studies in Celebes. Results of the author's expedition to Celebes 1917–1920. IV. Games and Dances in Celebes. Göteborg
- Kaudern, W. 1938. Ethnographical studies in Celebes. Results of the author's expedition to Celebes 1917–1920. V. Megalithic Finds in Central Celebes. Göteborg
- Kaudern, W. 1944. Ethnographical studies in Celebes. Results of the author's expedition to Celebes 1917–1920. VI. Art in Central Celebes. Göteborg
- Koningsberger, J.C. In Van Hustijn, P. 1918. Memorie over de Soela-eilanden, etc. With plates and maps. Mededeelingen van het Bureau voor de Bestuurszaken der Buitenbezittingen bewerkt door het Encyclopædisch Bureau. 15. Batavia.
- Kruijt, A.C. In Adriani, N. and Kruijt, A.C. 1912. De Bare'e-sprekende Toradjas. Batavia: Landsdrukkerij.
- Lindberg, C. 2006. A Swedish ethnographer in Sulawesi: Walter Kaudern. In: Darnell, R. and Gleach, F.W. (eds.) *Histories of Anthropology Annual*, 2, 264-272.
- Macdonald, A.A. and Johansson, F. 2013. Biological treasures rediscovered: the Walter Kaudern legacy. Göteborgs naturhistoriska Museum Arstryck, 2013, 58-64.
- Sarasin, P. and Sarasin, F. 1905. Reisen in Celebes: Ausgeführt in den Jahren 1893-1896 und 1902-1903. Materialien zur Naturgeschichte der Insel Celebes. 5, (1), 30-43. C.W. Kreidel's Verlag: Wiesbaden.
- Tarip (untraced).
- Ten Kate, P. 1910. De wegen van Bada naar Napoe. Mededeelingen van wege het Nederlandsche Zendelinggenootschap. 1910, 292.
- Valentijn F. 1726. Oud en Nieuw Oost Indien. 3. J van Braam: Dordrecht.
- Wassén, H. 1942. Obituary: Walter Kaudern, 24 March, 1881-16 July, 1942. *Man*, 44, 50-51.
- Weiner (untraced)

